THE
MEDICAL AND SURGICAL REPORTER.

No. 2060. SATURDAY, AUGUST 29, 1896. VOL. LXXV—No. 9

ORIGINAL ARTICLES.

THE PURELY PHYSICAL EXAMINATION OF THE ALIMENTARY ORGANS.*

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In choosing this topic for discussion, I do not wish to be understood as disparaging the chemical examination of the stomach contents. Chemical tests reveal the present capabilities of an organ; physical exploration enables us to judge of its past and future.

As a matter of routine, it is well to expose freely the surface of the body from the nipples at least to the umbilicus, and lower if there exists any suspicion of intestinal disease or involvement of the vermiform appendix. The starched shirt of men, the corsets and numerous waist-bands of women, are obstacles to a careful examination.

I. INSPECTION.

Inspection affords an idea of the general nutrition, of the tone of the abdominal walls, of the presence or absence of jaundice and ascites. If the veins are prominent, we may suspect hepatic cirrhosis or some other interference with the return circulation. We may be able to determine whether nutrition has been previously influenced by rhachitis or pregnancy, the former leaving traces in the expanded thorax, misshapen sternum and cartilages and puffy abdomen; the latter in the pigmentation of the linea alba and dermal striæ. The constriction of corsets may be seen, an objective proof of tight lacing, which vice no woman will acknowledge. Very occasionally we may see the outline of the viscera, especially if the abdominal wall is flabby and there is a hypertrophy or tumorous enlargement. In advanced cardiac disease with regurgitation through the tricuspid valve, the ventricular systole is communicated directly to the incoming venous blood and the pulse is sometimes seen or felt in the throbbing of a congested liver. An analogous pulse is sometimes noted in the spleen in well-marked aortic regurgitation.

II. PALPATION.

Palpation of the normal abdomen yields, for the most part, negative results. If the liver is enlarged, we may feel its firm mass below the costal arch,

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and the fingers may be made to jump off its lower margin into the softer tissues beneath. The spleen must be enormously enlarged to be palpable. It is seldom so for more than a short time, except in either chronic malarial enlargement, splenic leucocythemia and cancer.

The soft alimentary canal yields little to palpation unless there be extreme gaseous or fecal distention of one part in contrast with collapse of adjacent parts or some kind of induration. Induration usually means tumor, and in most instances, cancer. A fibroid thickening of the pylorus may, however, simulate cancer, as pointed out by Virchow and Ewald. I once found in the great omentum of a woman who died of cancer of the cervix uteri, a disc-shaped metastatic cancer as large as a dollar and half an inch thick. This could easily have been felt through a thin abdominal wall. Fecal masses are apt to be mistaken for tumors, and it is well, after the supposed discovery of any tumor, to empty the bowels by a cathartic or an enema, or both, and then verify or disprove the tentative diagnosis. Fecal masses should be thought of, not merely as obstacles to the examination of the abdomen, but as conditions demanding investigation on their own account. Even a vaginal examination may be desirable simply for the sake of throwing light on the condition of the rectum. With our vast array of cathartic drugs and mechanical means of stimulating the bowels, some acting on the secretions of the small intestine, some on the muscular coats, some particularly on the large intestine, some directly on the rectum, constipation is too broad a term to be used as a practical basis for therapeutics. We must know where and for what reason the fecal lodgment has occurred.

Palpation of the vermiform appendix has been shown to be feasible by Edebohls. It is not very difficult in a person with thin abdominal walls. The patient is placed on the back with the hips flexed so as to relax the abdominal muscles. Standing on the left of the patient, the physician feels for the outer border of the right rectus muscle, sinking the fingers deep against the posterior wall of the abdomen, at the level of McBurney's point, that is, half way between the umbilicus and the anterior superior spine of the ilium. The appendix is followed upward, feeling like a piece of tape under the finger when normal. When inflamed, it may feel like a pencil or pipe-stem.

In a case of chronic inflammation of the appendix which I saw in February, 1894, there was a lump as large as the terminal phalanx of the thumb. The patient, an Italian, complained of "muchy dolore" which was at its height about six weeks previously. Operation was performed February 21st by Dr. Herman Mynter and myself. The appendix was kinked on itself and bound together by adhesions which contained granular masses suggesting tubercles. The appendix itself, when dissected away, was hard but not particularly enlarged. No bacilli were found. Recovery was complete. An appendix so plainly palpable as this is decidedly uncommon.

Deep palpation of the cecum and ilium has been recommended to obtain gurgling as a diagnostic sign in typhoid fever. Prof. William Pepper, of the University of Pennsylvania, deserves commendation for the manner in which he has condemned this procedure as unnecessary for diagnosis, while it menaces the integrity of the bowel.

Both percussion and palpation enable us to locate a fecal mass in the sigmoid flexure, a place of retreat for feces denied exit either by destructive lesion of the rectum or by contraction of the sphincters to prevent a passage over inflamed piles, fissures and the like, or because the individual, from laziness or false modesty, postpones the movement which nature demands.

III. PERCUSSION.

Percussion is chiefly of value in determining the size and shape of organs, and, as has been stated in regard to the sigmoid flexure, in deciding whether the alimentary canal is distended with solid matter or gas.

On heavy percussion, the liver should be detected at the level of the fourth rib, where the nipple is usually but not always located. Flatness on light percussion should begin at the sixth rib in the nipple line and extend to the costal

arch. Quite frequently, the intestine will crowd up under the border of the ribs, so as to diminish the area of liver dullness. Thus, the diagnosis of hepatic cirrhosis with contraction should not be made from a single examination, and especially should an error be suspected, if there is flatulent distention of the intestine. In one patient in whom, from other symptoms, there was good reason to anticipate hepatic cirrhosis, five or six examinations on different dates were confirmatory of the small size of the liver, but the next examination showed that the diminution of the area of dullness had been due to distention of the bowel. It is probable, however, that cirrhosis really exists in this case in spite of the normal size of the liver.

In hydatid cyst, with loose daughter cysts enclosed, percussion develops what is known as the hydatid thrill or fremitus. This is a miniature ballottement, the blow driving the daughter cysts away from the parent wall, while the pleximeter finger feels the impact of their return. It is rather difficult to state exactly what the area of the stomach should be. It varies greatly within normal limits, according to the time after eating and the amount of gas produced during digestion.

Usually, in a stomach distended as much as is possible without spontaneous relief of pressure through the œsophagus, the highest and extreme left points coincide, falling on the sixth or seventh rib and as far to the left as the thickness of the thoracic wall will allow. From this point there is a sag downward and to the right. The stomach should not pass more than one-fourth inch to the right of the median line, nor should it descend to within an inch or an inch and a half of the umbilicus.

I should like to call attention to a fact to which many text-books do not allude; namely, that the greater curvature of the stomach, as mapped out by percussion, is in most instances not a simple convexity, there being usually a slight concavity in the middle of the convex curve, marking a tendency to the division of the stomach into two digestive compartments.

The general tympany of the paralyzed and distended bowel of peritonitis and typhoid fever is approximated in a quite common clinical type of intestinal indigestion, occurring particularly in hard-working women between the ages of thirty and forty-five, who eat too little nourishing food and drink too much strong tea, which not only interferes with gastric digestion, but seems to cause constipation by its astringent action. The tympany indicates a state of fermentation and putrefaction, due to the entrance into the intestine of imperfectly-digested chyme and to the length of time occupied by the mass in traversing the intestine.

The arch of the colon can usually be mapped out by percussion on account of the difference between its resonance and that of other parts of the alimentary canal. The colon note is somewhat lower than that of the small intestine and it is usually just about a semitone higher than that of the stomach. These facts are in uniformity with the general acoustic law that the pitch increases as the calibre of the resonant body decreases.

Percussion of the normal spleen is not very satisfactory. Its dulness is ordinarily included between the upper border of the ninth and the lower border of the eleventh rib and between the mid-axillary line and a parallel line an inch and a half to the left of the row of spinous processes. The well-known normal variations in size and the occasional overlapping of emphysematous lung or distended stomach render it impossible to make definite statements as to the size of the spleen. Sometimes percussion fails utterly to reveal its presence. Any moderate enlargement such as is found in acute infectious diseases in the back pressure of hepatic cirrhosis and the like is readily demonstrable by percussion, while in the enormous enlargements which are palpable, percussion is unnecessary.

Percussion and palpation are of great value in locating abdominal tumors and in determining the presence of fluid whether free or encysted. It is so difficult, without going into the details of individual cases, to discuss this subject that I shall allude only to a few points. The smallest amount of peritoneal fluid that can be demonstrated is about a pint, often a quart will be overlooked. Even free fluid does not always flow readily

from one part of the abdomen to another, so that a change in the position of the patient may not be immediately followed by an alteration in the relations of dulness and tympany. The transmitted wave of fluid—a sign that may be considered under the head of either percussion or palpation—must be distinguished from the fluctuation of fat in the abdominal wall. Some physicians claim to be able to distinguish a difference between the impact of these two fluctuations. Without questioning the truth of this statement, I must frankly admit my own inability to make the distinction except by pressing the edge of the hand or some similar object against the front of the abdominal wall in order to prevent the transmission of the fat wave. With such a damper firmly applied, the persistence of the impulse in the flank may be considered to be due to fluid.

IV. SUCCUSSION.

A similar wave on a small scale is produced by succussion of the dilated stomach and as a normal stomach has too much tonicity to permit a visible or palpable fluctuation, this sign is of diagnostic value in cases of suspected dilatation.

V. AUSCULTATORY PERCUSSION.

This means of physical diagnosis, though long known to the profession, has never become popular and both teachers and clinicians have neglected it. In one sense, ordinary percussion is auscultatory, since we listen for the sound elicited by the finger tap, though the careful physician ought to depend also on the thrill communicated to the plexi-meter finger and to be able to obtain much information from a perfectly silent percussion. Auscultatory percussion, so-called, reinforces the ear with a stethoscope; it bears the same relation to ordinary percussion that stethoscopic auscultation in a case of asthma bears to the mere listening for wheezing. It is not necessary to have any peculiar form of stethoscope; any good instrument will suffice. I use a common stethoscope with flexible rubber tubes ending in hard rubber ear-pieces. These flexible substitutes for the woven and metallic conductors are of advantage merely in making the instrument more portable. The end of the stethoscope is placed over the most superficial portion of the organ to be mapped out. Percussion is performed with the finger tip or a pencil end, directly on the skin. No assistant is needed when the percussion is over the same organ upon which the stethoscope rests. The sound conveyed to the ear has a peculiar sharp quality, whereas a fraction of an inch beyond, a dull sound is elicited. It might be supposed that the intervention of a rib would cause confusion on account of the superior conductivity of bone. This, however, is not the case for the sound seems quite independent of any modification by the body-wall.

It is possible in many cases to map out the beginning of the duodenum, which from its continuity with the stomach has practically the same resonance. So far as the stomach and the right lobe of the liver are concerned, the results of auscultatory percussion are about the same as for ordinary percussion, though perhaps a little more decisive. Auscultatory percussion has the advantage of enabling us, in almost every instance, to map out the lower margin of the liver whether the intestine is distended with gas or not. Personally, I am not able to map out the left lobe of the liver by ordinary percussion, although, in many cases, it is palpable. By auscultatory percussion, however, I believe it is possible to outline the entire liver in most cases. This qualification must be made, however, that even auscultatory percussion does not completely reveal the size of the liver nor of any other organ, but only of that portion nearly or quite in contact with the body-wall. This is all that is necessary for practical purposes; indeed the actual size and shape of organs is comparatively unimportant except to the pathologist and the operator. In auscultatory percussion, we almost lose the musical quality of the note elicited, which is so important in ordinary percussion. The ear must be trained, however, to an acute appreciation of the little shock which is carried through the stethoscope so long as the blow falls upon the area of contact with the body-wall.

VI. SIMPLE AUSCULTATION.

This means of diagnosis, so valuable

in the investigation of the lungs and heart, is not so important when the digestive organs are concerned, since the latter are traversed only by slowly and irregularly-moving fluids. By auscultation, however, we can gain some idea of the force of peristalsis and the stomach can be heard emptying itself, little by little, through the pylorus; but, as a practical method of determining the delay of chyme in the stomach, auscultation fails on account of its tediousness. If the patient drinks while the stethoscope is applied over the stomach, a squirting sound announces the arrival of fluid in the stomach. Sometimes a regurgitation is also heard, indicating a relaxation of the cardia, but, after all, these phenomena are not of much practical importance.

VII. THE COMBINED METHOD.

In borrowing this term from gynecology, I refer to any physical examination of the stomach aided by the stomach tube. It is largely a matter of accident whether or not the stomach is sufficiently distended to enable us to mark out its area by percussion. The passage of the tube allows us to distend the organ at will with either water or air or both. The stomach may be distended with gas by the separate administration of a carbonate and a weak acid, but this method —due originally, I believe, to Peck's bad boy, who nearly exploded his father with a Seidlitz powder—is not so certain nor so safe as the filling of the stomach by blowing air through the tube by means of an atomizer bulb. The amount of water accommodated by a stomach affords some indication of its size. It is a safe rule, however, never to introduce more than 1500 cubic centimeters at the first sitting, nor to continue the introduction of water after the patient, previously warned, gives notice of a feeling of tension or discomfort. Having obtained the area of an inflated stomach, we may vary the experiment by pouring in water and then reinflating above the water with air. In this case, we get first the tympany of the colon, then flatness distinguishing the lower curve of the stomach, and, finally, tympany in contrast with pulmonary resonance and hepatic dulness. A beautiful metallic tinkle is heard by placing the stethoscope at the level of the fluid and blowing air through the tube, the bubbles rising to the surface and bursting. This experiment is useful rather to illustrate the quality of metallic tinkling to students than for practical purposes, since the level of liquid can be determined quite as readily by percussion.

An idea of the muscular power of the stomach can be obtained by comparing the level of liquid in the funnel of the stomach tube with the level of the liquid internally. Usually, with a patient breathing quietly and not gagging, the water stands at about the level of the sixth rib in the nipple line. Retching, without auxiliary contraction of the abdominal muscles or diaphragm, will indicate the strength of the stomach wall.

Some attempt has been made to estimate the size of the stomach by noting the alteration of level produced by adding given quantities of liquid. An experiment tried by myself showed that, during an ordinary lavage, about 1500 cubic centimeters of water disappear, either by absorption or leakage through the pylorus, mainly the latter. With this observation in mind, it is clear that no reliable conclusions can be based on the change in water-level. Moreover, if it is true, as I believe, that the direction of the axis of the stomach varies in different individuals, the more upright stomach would, from this test, appear to be smaller than one of the same size situated nearly horizontally.

The combined method of exploration of the abdominal viscera applies in practice only to the stomach and the large intestine. While the arch of the colon may be quite accurately mapped out by auscultatory percussion, or even by ordinary percussion, by a person with a sensitive ear, the introduction of water by a high enema would heighten the contrast with the small intestine and the stomach. Again, the connections of a tumor may be made plainer by filling the large intestine alternately with air and water.

Senn's test as to the integrity of the intestine in gun-shot wounds of the intestine deserves a notice. Through the colon tube, he introduces hydrogen gas, which is lighted as it issues from the external wound. Of course, one should

not apply this test unless ready to perform celiotomy, as it practically insures, what is imminent in every case of intestinal perforation, the escape of fecal matter into the abdominal cavity.

The direct examination of the rectum, and of the mouth, pharynx and œsophagus, might logically claim a place in this discussion, but for the radical difference in technique.

SUCCESSFUL SECONDARY CELIOTOMY FOR HEMORRHAGE TWELVE HOURS AFTER THE PRIMARY OPERATION.*

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The case reported is a somewhat unusual one in many features, and deserves the notice of the profession. The points of particular interest will be readily seen. The patient was Mrs. R., aged thirty-eight, married. She was admitted to Jefferson Medical College Hospital June 4, 1896. Both of her parents, as well as several other near relatives, died of tuberculosis. Her catamenia appeared when she was twelve years of age and were always painful, and irregular as to time and quantity. She had been married seventeen years, had two children, aged sixteen and fourteen, and had had two miscarriages, the first thirteen years ago, and the second eleven years ago, after two and four months gestation respectively.

The beginning of the present illness dates from the birth of the second child fourteen years ago, the puerperium at that time being complicated by a septic pelvic inflammation of a severe character confining her to her bed three months. For a year or more subsequently she was the subject of frequently repeated uterine hemorrhages. Ever since, she has suffered from a general train of symptoms common to chronic inflammatory diseased conditions of the pelvic organs, all of which have gradually become more and more pronounced with time, especially so since the occurrence of the last miscarriage. She presents all the characteristics of a marked nervous type, and is subject to frequent hysterical seizures. An examination of the heart disclosed a blowing systolic murmur. The lungs were healthy but the urine contained albumen.

An examination showed the uterus retroflexed; bilateral inflammatory disease of appendages, all firmly fixed by dense adhesions.

The necessary operation was performed by Dr. Fisher, June 8, at 10.30 A. M. The usual general aseptic precautions were taken, ether anesthesia was produced at first, but on recalling the possible influence of this anesthetic on the evidently damaged kidneys, chloroform was substituted. The uterus was dilated, curetted, irrigated with normal salt solution, and packed with iodoform gauze. The patient was now placed in the Trendelenberg posture and an abdominal incision was made through a wall of fat and muscle at least three inches in thickness.

The peritoneal cavity having been opened, the omentum was found to cover the pelvic structures, and, in connection with coils of intestine, formed a conglomerate mass with the uterus and appendages held together by moderately firm adhesions. The omentum and intestine were carefully separated from the pelvic organs. The uterus was retroflexed and fixed to the rectum and pelvic floor. After separating many dense adhesions, Dr. Fisher was enabled to raise the uterus and shell out the left ovary and tube from the broad ligament. The right tube and ovary were densely adherent to the broad ligament and the side of the uterus, the former having degenerated into a cyst the size of a small hen's egg, which ruptured in the effort at its enucleation. The fimbriæ

*Performed by John M. Fisher, M.D.

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and abdominal ostii of both tubes were obliterated and the tubes throughout their length presented the structural changes common to interstitial inflammatory disease. Both appendages were removed by a "mass ligature."

The abdominal cavity was irrigated with a normal salt solution, at a temperature of 112° Fahr., and sponged dry. Some oozing persisted, but no more than usually attends the separation of adhesions in other cases of a similar character, without the least cause for alarm. A Mikulicz drain was introduced, the gauze being firmly packed between opposing raw surfaces. The abdomen was closed with interrupted "through and through" sutures. Time of operation, one hour.

The patient was returned to bed in excellent condition. The drainage at first was no freer, nor were the dressings more blood-stained than is generally expected in favorable cases. At about six P. M., however, the dressings became more deeply stained, and saturation at shorter intervals than previously was noted, the patient at the same time giving evidence of progressively deepening shock. Dr. Fisher was sent for, restoratives administered, and everything placed in readiness for a secondary operation. Upon Dr. Fisher's arrival (ten P. M.), the patient was deathly pale, delirious, picking at the bed clothes, and covered with a cold, clammy perspiration. Her pulse was almost imperceptible and beat at the rate of 160 a minute, respirations rapid.

Chloroform was given sparingly. A hypodermatic injection of $\frac{1}{10}$ grain of strychnia was administered, the stitches were cut and the gauze drain removed. Very little fluid blood was found in the pelvic cavity. The patient was at once placed in the Trendelenberg posture, and by the aid of an electric head-light, the source of the hemorrhage was readily detected. A mass of clot occupied Douglas's pouch and was clinging to the site of the previously adherent right ovary. Upon removing this, the parts beneath presented a large raw oozing surface, confined, however, to the posterior aspect of the uterus and right broad ligament, and attached to the latter were several small fringes of the imperfectly ablated ovary. There were no spurting vessels. Removal of the uterus at this juncture, or separate ligation of the vessels, were out of the question. The patient was doing badly, and whatever was to be done had to be done quickly. Both broad ligaments were, therefore, secured in the grasp of long, narrow-bladed hysterectomy forceps, reaching down low enough to catch the uterine arteries, that upon the right side being placed at an angle with the uterus, so as to include the bleeding surface of the right broad ligament. The forceps were locked and allowed to remain, the handles projecting from the lower angle of the wound. The oozing ceased at once. The abdomen was now freely irrigated with hot normal salt solution, and after introducing the stitches, the cavity was again filled with the solution and closed without drainage. Fifteen minutes had elapsed from the time the abdomen was re-opened until the last stitch was tied.

During the operation $\frac{1}{20}$ grain strychnia was administered hypodermatically, and this, in connection with the hot salt solution, revived the previously flagging circulation very perceptibly. The foot of the patient's bed was raised, the head lowered, external heat applied, a second hypodermatic injection of $\frac{1}{20}$ grain of strychnia, with ten drops of tincture of digitalis, was administered, and stimulating enemata, consisting of whiskey, tincture digitalis, liquid peptonoids and normal salt solution, were given at frequent intervals; in fact for a period of eighteen hours the rectum was kept filled with as much fluid as it would tolerate. Within six hours the pulse at the wrist was of fair volume but still rapid, consciousness had returned, and other evidences of returning vitality became manifest. The following day her general condition was good; food was given by the mouth; the pulse was full and strong; re-actionary temperature of 103° at noon, which gradually defervesced until it reached the normal on the seventh day.

The gauze was removed from the uterus the following day. The forceps on the left broad ligament was removed twenty-four hours after its application, that upon the right within thirty-six hours. The patient improved rapidly and made a perfect recovery.

The points of special interest in the history of this case are:—

1. The constitutional condition of the patient, suffering from a pronounced heart lesion and albuminous urine, making her recovery after considerable loss of blood and the shock of a secondary operation the more remarkable.

2. The slowly increasing shock from loss of blood following the separation of extensive adhesions, as contrasted with the rapid collapse accompanying the slipping of a ligature.

3. The economy of time in re-opening the abdomen, and especially in arresting the hemorrhage by permanently clamping the broad ligaments so as to secure the main arteries of supply to the tissues involved.

4. Furnishing an indirect supply of fluid to the partially emptied blood-vessels by filling the abdominal cavity with normal salt solution and closing without drainage.

THE CHIEF PREDISPOSING CAUSE OF TUBERCULOSIS.*

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With all due deference to the tubercle bacillus as playing an important rôle in the production of tuberculosis, and with the highest respect for those who have discovered it, I do not and cannot consider it more than a determining factor in the production of this disease. Possibly it may be the only determining influence, and possibly without its presence the tubercle cannot develop in lungs otherwise fitted for its production. But even this is a fact that is but barely proven, and numerous contradictory and puzzling phenomena confront the theorist in his endeavor to fit his facts to his theory.

Be this as it may, there is undoubtedly an especially predisposing influence; a subtle something of so grave a nature that, to my mind, it is far more worthy of consideration than is that tiny germ. Of far more importance, because, without this predisposing influence, the tubercle bacillus would be as powerless as is the roadside dust to do more than create mere local irritation. Some physicians question whether this predisposing influence actually exists, probably preferring to ignore facts in order to render more perfect their theory of tuberculosis and its special germ. They seem to doubt whether, given an equal amount of exposure to germ influence, everyone's constitution is not equally receptive. They seem to undervalue the enervating effect of bad hygienic surroundings, relegating them to a secondary place.

At the risk of being thought antiquated and unscientific, I must express my firm belief that "consumption," or at least the predisposition to it, is hereditary, and that I wonder whether the bacillus bears any more causative relation to it than does the aggregation of small boys to a conflagration. The larger the number of small boys, the more fierce is the fire. A big fire seldom occurs without their accumulated presence, yet they are found in small numbers everywhere when no fire exists.

Undoubtedly, however, there is an intimate connection somewhere! Is not the theory of the causative relation of the bacillus a sound one? I do not really wish to ridicule a theory so well borne out by facts as the present one of tuberculosis. I merely wish to point out that it is not entirely sound, and that it does not reach the root of the problem, there being something of far more importance that is overlooked.

Few experienced practical physicians doubt the presence of this inherited something, called a predisposition, which often blights whole families or brands each member of a common stock who bears a resemblance to some specially debauched, dissolute ancestor. When both parents bear this inherited taint, despite a superficial appearance of sound health, do we not all tremble for the

*Read before the State Medical Association at Harrisburg, May 23, 1896.

fate of the coming generation? and is it not with reason?

Does this dreadful predisposition to ultimate decay show in earlier life no characteristic sign of its presence, no marks whereby we may recognize it? Yes, there are a few peculiarities; those spoken of by former writers and classified vaguely under the head of a strumous or scrofulous diathesis. With the more pronounced symptoms exhibited by these scrofulous subjects we are all familiar, though the less obvious yet none the less ever present are more readily overlooked. The feeble resisting power common to all is an unfailing attribute. If reared under circumstances favorable to health, the grosser symptoms of their disorder are obscured. Their growth may then be rapid, their frame well fleshed and their complexion rosy. Yet if in early life they are attacked by cholera infantum, diphtheria or the exanthemata, their tissues melt like snow, and they die readily, when their apparently less robust but untainted companions survive the same diseases without difficulty. If they attain a later age they are the subjects for softened spine or the various inflammatory bone and other diseases brought on by apparently trivial causes or the fatal destruction of lung tissue called pulmonary tuberculosis. Such subjects are prone to the inception of the minutest forms of germ life. The various parasitic skin diseases, as well as the itch and other large vermin, find in them a ready prey, living upon or penetrating their tissues, exhibiting such activity as renders their banishment most difficult.

A multitude of causes have been assigned as productive of scrofula;—too many, for where the etiology of struma is attributed to so many and so different factors one naturally questions the power of any one, especially when we consider how distinctive is the chain of morbid phenomena that struma exhibits. Further, there are none of these supposedly conducive elements which, separately or collectively, have not been well known to exist without a single symptom of tuberculosis (scrofula) resulting.

Its origin is generally ascribed to darkness, impure air, filth, starvation or an improper diet, exposure to cold and other unhygienic conditions, but do they more than favor its development? The Cornish miners who scarcely see the light of day, though dwarfed in stature, are a hardy race. So too, are the Esquimaux, so far as scrofula is concerned, though breathing for months the foul air of their huts, never washing, habitually improperly fed or half starved, and subjected to the vicissitudes of an Arctic climate. Among the civilized, the rich, the enlightened of the upper classes, who have, on the contrary, every hygienic surrounding in their favor, struma is still of common occurrence and this despite every effort to eradicate it. We then have good reason to look for some other single cause, one potent one, invariable, that may be found active in all ranks of life and among all races; one from which neither the rich, the poor, the enlightened nor the ignorant, no country and no race are exempt.

It is that hideous and loathsome disease, syphilis, which is commonest today and was the commonest centuries ago. It is that unquarantined pestilence which is variously estimated as afflicting from one-twentieth to one-tenth of the entire human race. This is the only disease which is undeniably entailed, to quote the Mosaic text, "upon the children's children to the third and fourth generation." Does not such a disease, so persistent, so characteristically a disease of decay, of rottenness—a disease resulting in the destruction or vitiating alteration of every tissue—not exert a special influence upon the human race which is as characteristic as it is wide-spread and general? Is it not reasonable to assume that this ravaging pestilence, which has warred against the purity of humanity for centuries on centuries, must have left its mark in some special condition of debility and exhaustion peculiar to it? Yes, I reply, it is, and it is thus that I account for the peculiar tendency of the descendants of drunkards and libertines to fall a prey to tuberculosis. This is why the once vigorous and healthy Sandwich Islanders fell in hordes, like dying sheep, from consumption, after the visit of the debauched sailors who infected them with syphilis. It is for the same reason that, in Alaska and in the West, among our Indians, syphilis, brought like a fever among them by the traders, has now been followed by its result, consumption.

Air, sunlight and other benign influences do much to renovate our enfeebled tissues and rebuild what the vices of our ancestors have pulled down. Could syphilis no longer prey upon the human race, the tendency of nature towards recuperation would soon regain for us the perfect health of our first parents, and the very name of the tubercle bacillus would be forgotten.

How long is the medical profession going to submit to be muzzled? Was it not some poor brother of our craft, a slave perhaps like Æsop, who ages ago left on record his prophetic warning in the legend of the Minotaur? How long will it be before our nation ceases to pay its annual tribute of maiden virtue and innocence to the monster?

DISCUSSION.

DR. LA PLACE:—That which is called inherited predisposition to tuberculosis is simply inherited lack of vitality or stamina, which may occur from a variety of causes. Similar artificial or postnatal conditions are almost as common.

Anything that tends to depress vitality will render the most healthy liable to infection.

Any overtaxing of the vital and physical energy invites disease.

Dr. Priestly performed an interesting experiment with gray rats, which in a normal condition are not subject to the disease. He took twelve of the animals and injected them with the tubercle bacillus, with the result that none were infected. He then took the rats and, placing them in a revolving squirrel cage, allowed them to work for twenty-four to forty-eight hours without food. Then, upon repeating the injection, they were everyone infected and died of tuberculosis.

THE SIGNIFICANCE OF MURMURS IN THE DIAGNOSIS OF VALVULAR DISEASE OF THE HEART.*

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The study of the exact significance of murmurs in the diagnosis of valvular disease of the heart may not inappropriately be prosecuted by arranging our cardiac cases into three distinct classes: 1. Cases in which the presence of a murmur assists in the diagnosis of some valvular lesion. 2. Cases in which, despite the presence of a murmur, valvular disease may not be diagnosed. 3. Cases in which valvular disease may be diagnosed without the detection of any murmur whatever.

It is in cases belonging to the first two categories, cases in which we may detect a murmur in the region of the heart, that most mistakes are liable to occur, especially in view of the much greater frequency of these classes of cases. It may, therefore, be remarked that a murmur alone—that is, without corroborative evidence—is never diagnostic of any valvular disease of the heart.

The first requisite, absolutely essential to the accurate diagnosis of valvular or other disease of the heart, is a thorough physical examination of the lungs and pleuræ. For the varying states of health and disease to which the lungs and pleuræ are subject find an expression to a certain, often marked, degree, in the condition of the heart, which condition is very frequently similar to that which follows in the wake of certain valvular lesions.

In considering these murmurs, we must first definitely determine that a murmur heard in the region of the heart is of endocardial origin. We must eliminate all question of exocardial genesis; all pericardial, cardio-pulmonary, so-called hemic and venous murmurs.

First, there is the systolic murmur, with its area of maximum intensity in the region of the apex beat, usually designated the mitral systolic murmur, and which, when detected, is usually considered sufficient evidence to warrant

*Abstract of a paper read at the meeting of the Medical Society of the State of Pennsylvania, May 19–21, 1896.

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the diagnosis of a mitral insufficiency, and which, when absent, usually presupposes intact mitral valves. And yet how frequently is the hemic murmur of chlorosis and other anemias heard loudest at the apex and during the systole? And how many pericardial and cardiopulmonary or pleuro-pericardial murmurs have their point of maximum intensity at, or are heard only in, the same region? And on the other hand, how frequently is the murmur of mitral insufficiency not heard with maximum intensity in the region of the apex, but upwards towards the pulmonary cartilage, where we usually hear loudest the so called hemic, or accidental, or functionary murmurs?

A stenosis of the mitral orifice is usually diagnosed, and only then, when there is detected a diastolic or a presystolic murmur, with its point of maximum intensity at the apex. These murmurs are usually said to be strictly localized to the apex, and the presystolic is usually considered pathognomonic of the disorder. Both of these suppositions are equally fallacious. We frequently hear a presystolic murmur at the apex in cases of aortic insufficiency. (Flint murmur.) Other cases have lately been reported showing that a presystolic murmur at the apex may also be due to adherent pericardium, and other rarer conditions, among them disturbed innervation. Again the murmur of mitral stenosis is very irregular in its occurrence and may be absent for months at a time, and it is quite frequently possible to diagnose the condition without the detection of any murmur whatever. We must exercise care in the diagnosis of single lesions at the mitral orifice. They are of rather unfrequent occurrence.

In endeavoring to correlate the murmurs heard at or about the aortic cartilage—the aortic systolic and aortic diastolic murmurs—to the pathological conditions which give rise to them, we must be careful not to misconstrue the signs we wish to interpret. An aortic insufficiency may give rise to an aortic diastolic murmur, or it may not. And a diastolic murmur heard in the region of the aortic cartilage may be due to conditions other than an aortic insufficiency, as for instance a transmitted bruit from the veins. An aortic stenosis engenders an aortic systolic murmur, but not all aortic systolic murmurs are due to an aortic stenosis. Between eighty and ninety per cent. of all cases of aortic incompetency are accompanied by an aortic systolic murmur without there being present any stenosis of the orifice whatever. We must, therefore, be careful not to mistake an aortic insufficiency for an aortic stenosis, or a single lesion for a double one. In considering lesions at the aortic orifice, we must determine the presence or absence of an aortic aneurism, which, if present, may give rise to a systolic, or a diastolic, or a double murmur.

While, by reason of their much less frequency of occurrence, valvular lesions of the right side of the heart are less liable to lead to diagnostic errors than are those of the left; still, as they do occur, it behooves us to make no mistakes. In considering the probability of the presence of a tricuspid incompetency or stenosis, it is more the evidences of the lesion, other than a murmur, that enable us to make the diagnosis. And particularly must I refer to various venous pulsations which have elsewhere been the subject of a more detailed dissertation (*New York Med. Journal*, January 18 and 25, 1896).

Of necessity, because of the complexity of the conditions, it is in cases of combined valvular lesions that more difficulty will be experienced in making the correct diagnosis. But in such cases, similarly as in cases of single lesions, the diagnosis is to be based upon the demonstration of the physical signs of the pathologically-changed physical conditions of the heart. Of these signs the murmur or murmurs present constitute a part. The detection of a murmur and the localization of it to its seat of origin are essential elements in the diagnosis, but alone they do not justify the diagnosis.

For artificial feeding of infants, Griffith says: "I do not advise using milk diluted with plain water for young babies under four months old. The simplest and most common used dilutent is barley water, which is almost entirely innutritious, its action being purely mechanical in breaking up the casein."

CURRENT LITERATURE CONDENSED.

The Relation of the Weather to Fatality Following Surgical Operations.[1]

A study of the records of Bellevue Hospital for the six months beginning January 1, 1895, and ending July 1, 1895, was made and a list compiled of those cases which died within nine days of operation. While the statistics are too few to warrant a positive conclusion, it may safely be assumed that, of the weather indications, humidity is the principal one governing the outcome of operations, and that the barometer, wind and weather must be considered in relation to it and to possible changes they may indicate. Excessive humidity at the time of injury, whether operative or accidental, is a factor of no little importance in the consideration of the treatment and final result.

The questions that naturally arise are: Why is high humidity so detrimental? How does it affect the body? It appears that the action is twofold:—

1. In reducing the amount of excretion of the products of metabolism by the lungs and skin. Expired air is loaded to saturation with moisture containing excrementitious material—principally carbonic acid, but also ammonia and organic solids. If dry air be inhaled the expired air contains 100 per cent. of moisture with its proportion of effete material. If the air inspired contain 90 per cent. of moisture, necessarily but 10 per cent. of the returning moisture is directly from the lungs. If the normal New York air contains 72 per cent., there is left for the lungs, as a means of elimination, 28 per cent. (with no allowance for difference of temperature). As this percentage is reduced, so a corresponding part of the lung-function is interfered with.

So also with the skin, which normally throws off excrementitious material which is increased in amount in dry, warm air and naturally lessened in moist air. Consequently, excessive humidity interferes with the action of the lungs and skin as eliminators, and the excrementitious material remains to poison the system or must be secreted and eliminated by other ways—notably the kidneys—thus throwing upon the system and organs, at a time when they can least bear it, a greater amount of metabolic products and a greater amount of work of elimination.

2. Air is a poor and water is a good conductor of electricity. The more moisture the air contains the greater its conductivity and holding power. Cold air usually means dry air, as the colder the air the less moisture it can contain, air at the freezing point being capable of holding only 2.1 grains (0.136 gramme) per cubic foot, while at 98° F. (36.6° C.) it will hold 18.1 grains (1.17 grammes).—(*Climate and Health*, United States Weather Bureau). In cold, crisp, dry air one feels invigorated and filled with surplus energy; in warm, muggy, moist air, just the reverse. Is not this because, in the first case, the electrical potential of the body is high and that of the air low; and, in the second, the potential and conducting power of the air is high, it taking from the body sufficient to equalize or more nearly equalize the potentials, leaving the body deficient, and, as the contact air is continually changing, there is a constant loss of electricity?

If the effects be so noticeable in the normal state, is it not possible that they are still more marked under conditions—such as operation or accident—which, reducing the vitality, cause a reduction of the capability for normal potential; and, under circumstances increasing the potential, capacity and conductivity of the air, with change from positive to negative, would we not have surroundings very favorable for a rapid, large and continuous loss of electricity, and the conditions resulting which we now term shock and collapse? In support of this view the author quotes such authorities as Draper, Jenkin, and Tillmann.

These influences of humidity may best be counteracted as follows:—

1. Postponing operations of magnitude till the weather indications were

[1] Dr. Fred. Walker Gwyer, before the New York Surgical Society, *Annals of Surgery*, May, 1896.

most suitable. In a large hospital practice, were this done habitually, the work would very soon be in arrears; also, certain cases require immediate operation; but there are a large number of cases (those of disease and chronicity) in which operation might, without detriment, be postponed twelve, twenty-four, or forty-eight hours, or even for several days. The weather returns and indications might be obtained each morning, and, if unfavorable, those cases set for operation, which can be postponed, might be held over till such time as the weather be more favorable.

2. Drying the air. Those cases which require immediate operation and with unfavorable weather conditions, should be operated upon in, and afterward kept in, a dry atmosphere. This could be done easily in a hospital, and comparatively well in a private house, by attention to windows, doors, etc., and elevation of the temperature.

3. Raising the electrical potential of the air and of the body. The dry, warm air supplied in the operating and reception rooms will, in itself, serve to do this; further, the electrical potential of the room may be raised by the use of a static machine, and, in addition, a small continuous current might be supplied to the patient.

Exhibition of the Skeleton of a Eunuch.

In the large cities of Egypt, chiefly in Cairo, one meets on the streets quite a number of eunuchs attached as servants to wealthy families, and especially employed as guardians of women confined in the harems. As Godard had already observed, during his remarkable scientific journey in Egypt, these unfortunate fellows present, when they are adults, a very slender stature and shape, by which they are easily recognizable even from a distance. On the contrary, in childhood the castrated in no wise differ from other children of the same age. But as soon as they reach puberty, their growth occurs with great rapidity, and in a short time they almost measure two metres and above.

During my last stay in Egypt, says M. Lortet, I had the opportunity of dissecting in Cairo the body of a eunuch, about twenty-five years old, coming probably from the Echillouk's lands, situated in the regions of Bahr el Gazal, far south of Karthoum. The cranium was well formed, but the maxillary and dental prognatism is of the most pronounced type. The size of the skeleton is one metre ninety-six, while that of the subject alive was certainly above one metre ninety-nine.

The thorax seems very short when compared with the length of the lower limbs. The pelvis is very small, almost atrophied. On each side the obturator foramen is so large that there exists between them but a very narrow symphysis pubis.

The long bones are all exceedingly slender and do not present the crests intended for the insertion of muscles. The humerus is comparatively short. The radius and ulna are long and weak. The metacarpal bones very elongated and the phalanges alike, constitute a hand of lengthened and narrowed build, almost simian in shape. The femur very weak, hardly shows any curvature. The tibia and the fibula, both very slender, are surpassingly long. The feet are flat. The metatarsal bones and the phalanges are also very slender and very long.

The unusual lengthening of the limbs, is very remarkable, chiefly in the lower limbs. It was most interesting to point out this fact. It corresponds entirely with what we can verify in animals.

The ablation of the testicles, therefore, when performed before the growing age, brings on an increase in length of the abdominal limbs.

In Egypt, castration is at present performed on boys from seven to ten years old, by the monks of certain Coptic convents, who reap a good profit by supplying the harems of wealthy Mussulmans with some of their mutilated victims. The operation is made in two different ways, and I am sure of these facts. The first operative method consists in cutting off with a razor the sexual parts as near as possible to the pubic region, carrying away in a single stroke both the penis and the scrotum. Then the patient is buried, almost up to his neck, in some fine and dry sand for the purpose of staying the hemorrhage. After four or five days the sufferer is dug out and the wound is dressed with a few rags sprinkled with oil.

The second operative procedure consists in dividing or rather in crushing the spermatic cords and the penis by means of a strong twine whose extremities the operator pulls apart with all his might. The sufferings of the child are, then, horrible, but hemorrhage is not to be feared so much in this case. The sufferer is, therefore, not buried in sand and his wound is dressed with acacia bark, which is rich in tannin. But in either of the two procedures entailing these barbarous mutilations, two-thirds of the children succumb.

Ophthalmia Neonatorum.[2]

On being called to see a case of ophthalmia neonatorum, I first warn all the attendants of the danger to their own eyes as well as to those of the patient, not letting the mother hear much of the latter. Some years ago, I saw a grandmother lose both eyes as the result of inoculation from her grandchild, although the little patient made a perfect recovery.

On first seeing a case of ophthalmia neonatorum, I order a saturated solution of boric acid, for frequent cleansing; also

℞

Glycerite of tannin . . . . . ʒj.
Aqua dest. . . . . q. s. ʒi—M.
(Atropia sulphate . . . . ss. gr.
Sat. sol. acid boric . . . . . ʒss)—M.
(Argent nitrate, gr. ij, gr. iv, or
gr. vj to dist. water . . . . . ʒss.)

Four drops are ordered, and the patient's nurse is directed to put on one bottle a red or some colored string, with a corresponding color on the dropper used in that medicine, so the droppers and medicine cannot become mixed.

Acid boric gr. xv to vaseline ʒj, is ordered to be used on the lids to prevent gluing and to protect the skin during the frequent bathing.

The bottles are numbered 1, 2, 3, 4 and 5. No. 1 is the boric acid; No. 2, tannic acid; No. 3, atropia; No. 4, argent nitrate; No. 5, salt water.

The following directions are given, the numbers on the bottles only used: Bathe eyes well with No. 1 (boric acid solution) every hour. Four times a day, after No. 1 has been used, drop into each eye three or four drops of No. 2 (glycerite tannin). This cleanses the cul-de-sacs well; the lids should be manipulated thoroughly, and the secretion will come out in coagulated threads. The eyes are to be washed out with No. 1 again (boric acid solution). Night and morning, No. 3 (atropia solution) is to be dropped in; I do not wait for involvement of the cornea and iris before using the atropia. Four times a day, No. 4 (argent nitrate solution) is used as No. 2 (glycerite tannin), and the lids manipulated well, so it reaches the cul-de-sac. Immediately afterwards the eyes are flushed well with sodium chloride ʒj, aqua Oj. Then the lids are well anointed with the ointment.

The glycerite of tannin serves a double purpose: By coagulating the secretion, it acts as a cleanser, and then its action on the inflamed mucous membrane is favorable. Hydrogen dioxide is sometimes used for the same purpose. I think its use is dangerous, as it seems to have an unfavorable action upon the corneal epithelium, softening it and producing abrasions, which are followed by sloughs, loss of vision, etc.

I direct that nothing be used about the eye for cleansing, such as sponges; but instead, old linen and clean surgical cotton or such material as can be burned. When there is much edema of the lids, hot or cold applications are of much service. When these directions are followed from the first day of the disease, I do not believe any eyes will be lost.

[2] William Cheatham, M.D., A.B., Professor of Ophthalmology, Otology and Laryngology in the Louisville Medical College, etc., in *Virginia Med. Semi-Monthly*, June, 1896.

Emotion products of the human system are found capable of producing color and, says *The Lancet*, the biblical expression, "Though your sins be as scarlet" may have reason in fact as well as analogy if Dr. Gates may be believed. He says the various human emotions and passions, good and bad, result in the formation of definite secretions. These circulating in the blood, act upon the brain and thus cause vice or virtue. He believes that they are excreted with the perspiration, in which they can be shown by chemical tests. He says he had isolated forty "emotion products." Vice and virtue give rise, respectively, to poisonous or beneficial products, "but the worst of all these secretions is that of guilt."

TRANSLATIONS.

MEDICAL PRACTICE ABROAD.*

(Formerly Therapeutic Suggestions from Foreign Journals.)

Treatment of Purulent Ophthalmia.

Two new methods of treating purulent ophthalmia are advanced: Irrigation with permanganate of potash, and cauterization with nitrate of silver. Dr. Valude (*Méd. Moderne*, February 5, 1896) prefers the second, especially in case of lesions of the cornea. The irrigations of permanganate of potash must be considered only as an auxiliary in the treatment, and be employed only in abundant and rebellious suppuration. It is important to notice, besides, the mechanical influence of the washing with permanganate of potash, also the influence of it on the secretions. It is employed in solution of 1 per 3,000 or 5,000. The cauterizations with nitrate of silver must be considered as basis of the treatment. In fact, every time that an ophthalmia was treated by the irrigations with permanganate of potassium the treatment had to be terminated by instillations of 1 per 100 of nitrate of silver.

From the beginning, and if the ophthalmia is intensive, employ a strong solution of nitrate (3 : 100) twice daily. Little by little the solution should be reduced to 2 per 100 and to 1 per 100 in instillations. The application, even in weak solution, should never be used more than twice a day. In case the small grayish cavity, produced by the previous cauterization, has not disappeared, the application of the caustic must be suspended.

If there are lesions of the cornea, abstain from any cauterization, and be content with application of a pomade of iodoform.

Moreover, conjointly to these applications of caustic, which modify the mucous membrane, it is best not to neglect the large irrigations, the advantage of the mechanical action of which is not to be denied.

In particular cases, when the chemosis and edema of the eye-lids are excessive, employ also a solution of naphthol (1 : 5,000) to diminish the swelling.

All these solutions must be employed at a temperature of 30° C.

The employment of sublimate, in the treatment of ophthalmia in the newborn, is to be absolutely rejected.

Chronic Bronchitis of Children.

Bouchut (*Union Méd. de Canada*) recommends the following formulas:

℞

1. Syrup quinini.	300	(℥x.)
Arseniate sodii	0	10 (gr. ij.)

S.—A tablespoonful at breakfast.

℞

2. Cod liver oil	150	(℥v.)
Elixir garus		
Syrup quinini	āā 50	(℥jss.)

S.—A tablespoonful at dinner.

3. Tar-water at meals. An immovable blister on the arm. In case of an abundant expectoration, administer two pearls of santal in the morning and evening in an infusion of eucalyptus. Diet: Milk, vegetables, wine of quinine, and other tonics.

Broncho-Pneumonia.

Lasigne (*Union Méd. de Canada*) gives the following formula:

℞

Calomel		
Opium	āā 0	10 (gr. ij.)
Tartr. stib.	0	20 (gr. iv.)

M. et fiat charts, No. VI.

S.—One powder every two hours in bread.

In case of an intensive pulmonary congestion try bleeding, dry cups, vomiting, blister.

Guaiacol and Fissure of the Breast.

Dr. Molinier (*Journal de Med. et de chir. prat.*) observed a case of a midwife who desired to nurse her child, but, unfortunately, there were some cracks on the nip-

*Translated for THE MEDICAL AND SURGICAL REPORTER by A. Gordon, M.D.

ple, on account of which the suction was so painful that it became intolerable. The author applied cocaine previously in a similar case, but the child got so weak that he gave this up. Then he whitewashed the nipple with an oily solution of guaiacol (1 : 10). Two minutes after, the guaiacol was taken off and the child began to suck. The mother was astonished to feel so little pain, and since that time she continued nursing.

Pessaries in Uterine Deviations.

Dr. Léon (*Revue de therap.*) is of the opinion that pessaries are not used so often as they ought to be. In some cases the pessary is alone sufficient to cure; it is very useful in mobile retrodeviations, accompanied by pelvic troubles and nervous depression. If the pessary is not able to cure completely the uterine prolapse and colpocele, nevertheless it relieves it greatly.

The main conditions necessary for a good pessary are: First, it must put the uterus in a normal position; second, it must relieve the patient, inasmuch so that she does not feel its presence in the vagina; third, it must not irritate the vaginal mucous membrane.

A good pessary must be smooth and very light. The best material for it is the hardened India rubber, becoming soft in boiled, and hard in cold water, which permits the surgeon to modify the curvature according to the case. For the uterine prolapse the author recommends Shultze's, and for retroversion Hodge's and G. Thomas's pessaries. The anterior branch of the pessary must never be applied to the osseous pelvis; the muscles of the pelvic floor, of which the elevator ani is the most important, and the vagina, with the rectum, are the true support of the pessary, and are sufficient to avoid its displacement during micturition and defecation.

Ichthyol and Unguentum Napolitanum in Urethritis.

In fourteen cases of acute urethritis Dr. Tlinsky (*Méd. Mod.*, April 18, 1896) administered injections of ichthyol (2-3: 100) twice a day, eight of them were greatly improved in six to eight days. For the last six the solution was at first not strong enough, and he was obliged to increase it to four, five, or six per 100; four patients were cured only with these injections and two had recourse also to rectal suppositories of unguentum napolitanum (0.60 centgr. or gr. x each). The last combined treatment was completely successful and all the patients were cured. The same treatment was used by Dr. Tlinsky in fifty-eight cases of chronic urethritis, which had not been relieved by the ordinary treatment. Injections of ichthyol, the dose of which was increased progressively, and unguentum napolitanum gave a good result. The unguent was used in a particular manner. Ten or fifteen bougies covered with the following pomade were introduced every day in the urethra:

℞

Unguentum Napolit. . . 15	(℥ss).
Lanolini.	
Pomade with paraffin āā . 8	(℥ij).

The stricture was treated by dilatation with metallic bougies.

Urethritis and strictures were entirely cured by ichthyol injections, which diminish the inflammation of the urethral mucous membrane.

Hyperidrosis.

Dr. Heusner (*Deut. Med. Wochenschr.*, April 4, 1895) recommends the solution of balsam of Peru (1 per cent), acid. formicarum (5 per cent), and chloral hydr. (5 per cent.) in alcohol for local and general hyperidrosis. The general perspiration in phthisis and other diseases is improved by application only of a weak solution of acid. formic. (5 per cent.) and Peru balsam (1 per cent.) For sweating of the feet, arms and axilla chloralhydr. (5 per cent.) must be added to the ac. form. and Peruvian balsam.

Technique of Washing the Canal of the Urethra in Blenorrhagia.

The gonorrheal infection can be more rapidly and more easily exhausted by washing the urethra with a solution of permanganate of potash than by any other means, according to Goldberg and Janet. A solution of from 1:1000 to 1:3000 is used, according to the individual tenderness of the urethra. In acute cases where there is painful inflamma-

tion a still less proportion is used, that of 1:4000 or 1:6000. In this acute stage the washing is but a palliative therapy. The infected parts must be washed every twelve hours to begin, and when improvement becomes noticeable, once every twenty-four hours, but never more seldom than this.

It is necessary to have an irrigator of the capacity of one litre, a rubber pipe a half meter or meter in length, and a glass end-tube to a syringe with an olive-shaped opening of a diameter of 2 mm. It is important that the irrigator should be elevated. The washing can be done only in the anterior urethra or throughout the whole canal, in which case the solution is allowed to enter the bladder, although when this happens the anterior urethra cannot be very thoroughly cleansed.

When it is desired to irrigate the entire urethra, the irrigator should be suspended at least 50 cm. above the bed. Let a finger of the left hand pinch the pipe whenever it is necessary to interrupt the flow. As a general thing the glass end must be inserted fully into the urethra and the parts thoroughly washed before irrigation is begun. Let the solution penetrate the anterior part of the canal, which becomes distended, and as the sphincter bars the way, all the orifices of the urethra are consequently washed. So soon as the operator feels with the right hand that the urethra is distended, the left hand must control the flow of the solution by pinching the pipe, and the end must be partially but not entirely withdrawn from the orifice. After a small quantity of the solution has escaped, re-insert it, and again distend, repeating the manipulation thirty or forty times, or until the entire litre is used. While the canal is swollen and indurated it cannot easily be distended by the irrigation, and great precautions are to be taken in such a case. If an attempt is made to force a distention by increasing the height of the irrigator, it is possible to rupture the mucous membrane. Hence the necessity of the guarding pressure of the left hand upon the tube. It often happens that passing the urine helps the solution to penetrate the anterior urethra.

The pressure must be greater in irrigating the posterior urethra, at least 1.50 meters being necsssary. Still if the sphincter does not yield, effort should be abandoned, else the severity of the attack may be increased through the irritation which would then be set up in the anterior urethra. This failure of the sphincter to relax on the first or second washing has been observed in nervous people and in people with large and strong muscles. In these cases it is useful to inject, after a preliminary washing, a small quantity of a weak cocaine solution, which will overcome the resistance of the sphincter, and relieve the pain that sometimes attends the irrigation. The patient should be instructed to separate his thighs widely, and make a slow and deep inspiration simultaneously with an effort to avoid urine. This washing of the posterior urethra and the bladder should not be so full for the first few times as when only the anterior is washed. The patient must not attempt the irrigation himself without thorough instruction by the physician. The solution must be freshly prepared for each time, the hands thoroughly disinfected, and the exterior parts washed with a weak sublimate solution.

The after nervous effects in sufferers in the St. Louis tornado were in some cases very serious. Dr. W. B. Outten, editor of the *Railway Surgeon*, has collected a number of interesting statistics from physicians. He says a number of lethal issues have been observed among young as well as old, healthy and sick individuals, where death was attributed to fear during and in consequence of the tornado. Several suicides were reported, which, to an extent, were undoubtedly due to an intense disturbance of the *psyche* of the unfortunate individuals by the storm and its direct destructive consequences. The impression upon the nervous system of susceptible individuals will probably not be wiped out for months or years, and the study of the nervous phenomena resulting therefrom will be interesting, profitable and instructive. Nor will the subject be exhausted by the resulting affections of the nervous system alone, but the direct effect of the storm upon the course of other ailments and diseases will be equally interesting to note.

1853–1896

THE MEDICAL AND SURGICAL REPORTER

ISSUED EVERY SATURDAY

THE BUTLER PUBLISHING COMPANY, Publishers

Editor and Manager
HAROLD H. KYNETT, A.M., M.D.

Associate Business Manager
WM. H. BURR, M.D.

Editorial and Publication Offices, 1026 Arch Street, Philadelphia, Pa.
P. O. BOX 843

Editorial Staff:
A. L. BENEDICT, A.M., M.D. SAMUEL M. WILSON, M.D.

TERMS:—One year, three dollars in advance. Four months' trial, one dollar in advance. Subscriptions may begin at any date.
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COMMUNICATIONS for the Editor, and books for review, should be addressed to the Managing Editor of the MEDICAL AND SURGICAL REPORTER, 1026 Arch Street, Philadelphia.
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PHILADELPHIA, SATURDAY, AUGUST 29, 1896.

EDITORIAL.

PROFESSIONAL COMPLAINTS.

A contemporary popular magazine contains a symposium by six teachers, representing both sexes and various grades from the primary to the superintendency. Each article is written with the frankness allowable in anonymous contributions, and, from internal evidence and information received from other sources, we believe that the article affords a fair idea of the advantages and disadvantages of the life of a teacher who has been successful, though not in any extraordinary degree. It is significant that without an opportunity for concerted action, all of the writers emphasize the influence of politics both on the schools and on the life of the teacher, and all but one or two complain of the monotony of their life and of the inadequacy of the pay. The article is one of a class, setting forth the inner life of members of various avocations and indicating a fermentation of discontent. We believe that this discontent is due to the stage of development of American society. Its causes could not have existed in the rude equality of pioneer settlements, while they will tend toward self-extinction as we reach the stage of relatively permanent classes.

We do not mean to imply that the discontent expressed by these writers is unreasonable, but we think they have failed to perceive that the same com-

plaints they make of teaching might justly have been applied to professional life as a whole, and that the causes are generic and not specific.

There are 423,000 teachers in the country and about a quarter as many physicians, the average clientele of the latter being about 600 of the total population, and of the former about fifty persons of school age. The incomes mentioned in this symposium confirm the general impression that a successful teacher, well established, may expect a salary of from $1500 to $2000. Few will assert that the average physician has so great an income, especially if we deduct the strictly professional expenses for which the teacher has practically nothing to correspond. Yet the teacher works seven hours a day (actual school sessions are, in most places, five hours), five days a week, thirty-nine to forty-two weeks a year; the physician at least twelve hours a day, six and a half days a week, fifty weeks a year, or nearly three times as many hours as the teacher. The teacher's work is certainly monotonous and harassing but he would probably dislike to relieve its monotony by leaving his comfortable bed at midnight or by meeting the strange and nerve-wearing emergencies for which the doctor must keep himself in readiness. Both professions tend to peculiarities of thought and manner, both are liable to heavy responsibilities, and it is impossible to weigh the physical good expected of the doctor against the moral and intellectual welfare which society owes to the teacher, and to say that this or that is the more important. On the whole, the teacher has a longer and a less exciting life than the doctor. It depends on temperament which is the more enjoyable, and we must not forget that it is easier to see the thorns on our own roses than on our neighbors.

We are inclined to the opinion that a candid expression from the average member of any profession would emphasize the same two complaints—insufficient compensation and political machinations. A glance at the census returns explains the whole matter. Twenty-three millions, not much over a third of our population, are engaged in "gainful occupations." A little more than eight millions are actually wresting food from the soil or water, and, in the widest sense of the word, the producers number only fourteen millions. Seven millions are useful as traders and carriers, and personal and domestic servants. In the professions which minister to the health, financial, spiritual and intellectual welfare and the amusement of the people, are included nearly a million, upon whom, in turn, there must be two or three millions dependent. This million of professional workers, rightly enough, demand as much or more pay from the ultimate producers as do the four millions engaged in personal and domestic service, and, per capita, at least twice as much as the average producer can keep for himself. We can scarcely be understood to ignore the superior quality of the work of the intellect as contrasted with the work of the muscle, nor to commit the sophistry of arguing that because a man does not literally produce some material necessity of life, he is to be classed as a drone. But it must be admitted that the professional class is a heavy tax on the community as a whole, and that it must be kept within so narrow limits as possible. We believe there can be no dispute as to the truth of the assertion that the professional class is too large. Our own profession numbers at least twice so many men as are needed to care for the health of the country; the legal profession, even with its many collateral opportunities, is overcrowded, and a considerable share of the clergy are a dead

weight on society. For merely educational purposes, fewer teachers might suffice; but so long as mothers wait with impatience for babies to reach the age of admission to public schools and fathers shirk the moral and civic training of their children, together with the present growing tendency to relegate even the natural mechanical tastes of boys to manual training schools, and to systematize spontaneous play into the games of the kindergarten, the teaching profession must rather increase than diminish in relative numbers.

Still, the teacher, like the professional worker in other fields, must realize that he belongs to a class which has become too great a burden upon the community. His proper income will be paid grudgingly, simply because the natural ratio of producers and consumers has been disturbed. It is likewise obvious that, in the scramble for position, some other factor than merit must come into action. In professions like that of the teacher, which can be filled with comparative ease from without, candidates inevitably tend to become the puppets of outside politics, and the man who prefers to stand upon his own merits becomes unpleasantly aware of this pernicious tendency. On the other hand, the professions, at whose entrance greater barriers are erected, like our own, or the ministry, or the military, are pervaded by a tendency to the development of an intra-professional intrigue, which perhaps gives rise to more feeling and has as great disadvantages as the methods often brought to bear to secure advancement in the profession of pedagogy. Such things are no doubt regrettable, but so long as the supply is greater than the demand and the spirit of competition for mere place is so keen, there is no remedy.

ABSTRACTS.

THE MUSCLES OF RHACHITICAL INFANTS.*

The muscles of the newly-born and of the infant are feeble. The total weight of the muscles of the newly born, compared with that of the adult, is one to forty, while the relation of the skeleton is but one to twenty-six. After a while only the dynamo metric effect of the child's muscles will increase. Mainly is that so after the sixth year. But even then it is only temporary and not persistent. Nor is their sustaining and persistent strength satisfactory. The frequency of traumatic joint inflammation in infancy and early childhood results from the incompetency of muscular resistance. Falls are very frequent. Squinting is common in small children, simply because their muscles of accommodation and motion are insufficient. Scoliosis is frequent even in infants and children not suffering from or affected by any ailment. Growing pains are often muscular only, and the result of over-exertion.

This is much more evident in those suffering from rhachitis. What has been called rhachitical pseudo-paralysis by Berg and others is but a confirmation of the fact that the muscular structure is insufficient. This condition may be universal, or only a certain class or combination of muscles are the principle sufferers. Strabismus is particularly perceptible in rhachitical infants. With it is occasionally combined, or there is found isolated in some instances, nystagmus, which being in such cases the result of the insufficient ac-

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commodation, is mostly noticed to be bilateral. In many of these exclusively muscular cases there is a motion of the head in the same or opposite direction. An instructive case of the kind was published by Caille some years ago. Scoliosis is very common in rhachitical children and those who have been so.

It is true that rhachitical children are apt to be very strong after recovery, but the pressure that children are subjected to in our schools, and the expensiveness of fresh air in large cities, and the exposure to indoor life more than one-half or more of the year in our climate, allow but little chance to rhachitis smitten little ones. Habitual scoliosis of the very young, up to the tenth year, is almost exclusively muscular, mostly dorsal, or sometimes lumbar, with the convexity usually to the left. Not being able here to follow up the cases of school children with their left arm (shoulder forward) on the table, clothing massed under one gluteus, and defective sight, I refer only to what we see in rhachitical babies, particularly when carried on one arm only. More than healthy babies they grow scoliotic. Even when sitting in their chair, not supported by their own strength, they topple over in one direction or the other. Even before scoliosis occurs there is a general flabbiness of the muscles, which prevents free sitting altogether and causes an apparent or actual kyphosis. The latter is easily distinguished from a spondylitis kyphosis, inasmuch as it does not exhibit the same angular shape. As long as no bones participate in the deformity the diagnosis can easily be made between that caused by weakness and that resulting from actual bone disease. By raising the baby's heels and hips, while the chest and chin are supported, the apparent curvature depending on the weakened muscles will instantly disappear and lordosis rather than kyphosis will be observed.

This feebleness of the infant's muscles, when intensified by rhachitical malnutrition, is evidenced by nothing better than the symptoms connected with the insufficiency of intestinal muscular tissue in early life, which is exemplified in different ways.

One of the reasons why, for instance, renal disorders are not at all uncommon in intestinal diseases of early life, is the feebleness of the intestinal muscle in the young, which is less capable of expelling decomposing feces and toxins. This feebleness of the muscles shows itself, however, still more frequently in another symptom, which is quite common in rhachitical children, and even pathognomonic for early rhachitis. Take an infant born at full term, with good weight, breast-fed, and apparently well and increasing in weight. The bowels are reported to have been regular for four, six or eight weeks, then they become costive. There is no apparent change; the baby does not appear to be sick, is perhaps a little quieter and paler. Even the early cranial changes of rhachitis are sometimes not so perceptible as to be positive evidence of that disease. But this constipation is. Go on with the same feeding, air and other surroundings being the same, and more symptoms of rhachitis will soon develop.

In order to be certain of your diagnosis of rhachitis from this symptom, every other cause of constipation ought to be capable of exclusion; for instance, chronic colitis and peritonitis, deficient or viscid mucus, local atrophy of the intestinal muscle, or stricture of the intestine, perhaps even cystic tumor, though they be excessively rare. The apparent constipation, which results from insufficient feeding, either intentional or not, and resulting in starvation; the super-abundance of casein in milk, of starch in artificial food; the relative absence of sugar; hardened feces in the colon; hydrocephalus and other causes of defective innervation. Exclude also the drying up of the intestinal contents by excessive perspiration during the hot summer months, in hot rooms, under heavy clothing, or by diabetes insipidus. After excluding all these possible causes of constipation you will not fail to make your diagnosis of rhachitis, which will possibly be confirmed by other symptoms of rhachitis if you wait a short while, or rather, and that I prefer, by the effect of antirhachitical treatment.

The differential diagnosis is also to be made from the form of constipation, which I have termed congenital consti-

pation. The facts are briefly as follows:—

The embryological intestine is formed in separate divisions. There is no ascending colon before the fourth or fifth month of fetal life. In the newly-born it is very short. In spite of this the large intestine of the mature fetus is longer in proportion than that of the adult. In the new-born it is three times, in the adult only twice as long as the body. This is the same proportion that is found for the small intestine, this being twelve times as long as the body in the newly born, eight times as long in the adult.

The ascending colon being very short the surplus of length belongs to the descending colon, especially to the sigmoid flexure. As the pelvis is very narrow, the great length of the lower part of the large intestine causes multiple flexures instead of the single sigmoid flexure of the adult, consequently now and then two or three flexures may be found overlapping and compressing each other. One of them is quite often found in the right side of the pelvis, and not at all as an anomaly, as Cruveilheir and Sappey thought. Huguier found it in that location so often that he proposed to operate for artificial anus on the right side in small infants.

The great length of the colon and the multiplicity of its flexures retard the movement of the intestinal contents, facilitate the absorption of fluids and render the feces solid. Time and again have I been compelled to manually remove hardened feces from the recta of babies otherwise normal, and fed exclusively on normal breast-milk. The principal points of the differential diagnosis are consequently furnished by the time at which under the same apparently favorable circumstances constipation begins—in the "congenital" form at birth, in the rhachital in the second or third month.

In several instances, many years ago, I subjected rhachitical children of the second year who could walk to the Faradic and galvanic currents. It appeared to me that when they were tired the electrical current had to be increased. But such patients at that early age are not favorable subjects for experimentation. The treatment in every such case should begin with rest and with exercise gradually increased. Hydro-therapeutic measures, from warm bathing to cold friction, are indicated. Massage will improve the circulation, and chemism, and arsenic and phosphorus will probably improve the general tissue building. Veratria, physostigmin, digitoxin, in small doses and given frequently, may be able to restore or produce the normal tone in the feeble muscles.

THE RHEUMATIC DIATHESIS.*

There are in medicine certain scapegoats that are made to bear the burden of causing maladies for which no better explanation is at hand, and among these convenient animals none is obliged to carry a heavier load than is thrown upon the back of rheumatism. It remained for a recent French writer to collect together all the affections that may be put down to a rheumatic cause, and in a chapter of a work entitled "Traité de Médecine et de Thérapeutique," Dr. H. Richardiére attributes so many of the medical evils of life to the agency of this diathesis as to suggest that it might be as well to drop other titles and call all forms of disease rheumatism.

In general this writer states that the subjects of the rheumatic diathesis have a tendency to congestions, which, as he goes on to show, may seat themselves in almost any part or organ of the body. The tendency makes itself felt at a very early age, and shows itself during the first dentition particularly in the form of eczema of the face and head, starting usually from about the mouth, and spreading first over the cheeks. With older children the more marked results are affections of the mucous membranes of the air passages in the form of coryza, trachelo-bronchitis, pharyngitis

* *Northwestern Lancet*, June, 1896.

and tonsillitis. In children the slightest cold produces a coryza from which there comes a profound discharge, or a trachelo-bronchitis with cough, particularly at night. Asthma not infrequently comes as a sequel to the repeated attacks of bronchitis.

Sometimes the rheumatism takes the muscular form and there occurs torticollis or those vague pangs which mothers are wont to denominate "growing pains." The relation between the so-called growing pains and acute, articular rheumatism has now a world-wide acceptance, and every medical man meets with cases of endocarditis where the only history that in any way suggested a preceding rheumatism was the acknowledgment that the child was in the habit of complaining of vague pains in its limbs, which were made little account of at the time, and were attributed to the period of its growth.

The next series of pathological events to be laid to the door of rheumatism comes at the time of puberty and in both sexes takes the form of acne, a disease well known to prevail at this time, and usually attributed to the profound disturbance of the general system that accompanies the development of the sexual function. In girls, at this time, the diathesis is also blamed for various menstrual disturbances, in particular for dysmenorrhœa and the accompanying headache and backache of menstruation. In boys the tendency manifests itself in nocturnal and often in diurnal seminal emissions. If the latter phenomena are to be conceded to be due to rheumatism, it must be admitted that the diathesis is nearly universal with the male sex, since seminal emissions at puberty are so much the rule as to be generally considered physiological rather than pathological.

In adult life the dyscrasia leads to the development of plethora, with high color, vascular engorgement and abdominal protuberance. Early baldness appears, perspiration comes easily and freely and there is a striking tendency to eczema, especially in the axillary, inguinal, popliteal and palmar regions. This eczema is nearly always of the pruriginous variety, of slow development and chronic course. Meantime the appetite is good, but dyspepsia is a common occurrence, particularly in the form of fermentation with the accompanying gas. With the digestive disturbance goes constipation, whose natural accompaniment is hemorrhoids, with a marked tendency to bleed. The urine is scanty, high colored, and readily deposits urates; in some cases there is phosphatic urine.

On the part of the nervous system there is, in women, a tendency to hysteria and to neurasthenia. Neuralgias occur often, and may be seated in any part of the body. The neuro-rheumatic temperament is considered of much importance by Grassett, who attributes to it a leading part in the causation of nervous diseases.

Later in life the manifestations of the rheumatic diathesis are more grave, as it shows a tendency to attack the parenchymatous organs. The author here takes up the subject of gout as if it were one and the same thing as the disease he has been considering, and points out its relation to nephritis, diabetes and arterial sclerosis, which must be admitted. He also claims for rheumatic subjects a tendency to cancer greater than that of the average, but this is happily offset by the announcement that phthisis has a much slower course with them, and has a tendency to self-cure by a process of sclerosis of the lung tissue.

Such is the picture of the rheumatic diathesis drawn by the French writer. That it is in many parts greatly exaggerated none will deny. But it includes several affections that are coming to be classed as rheumatic, the chief of which among those already mentioned is tonsillitis, particularly in the follicular form. Another disease not mentioned by this writer, but claimed for rheumatism, is pleurisy, and it is to be admitted that rheumatism is getting a growing importance in the causation of skin diseases. In England it is the fashion to ascribe to gout every malady not otherwise accounted for. Many physicians have a way of calling all doubtful cases syphilis. Perhaps it would do no harm to give rheumatism a little more swing as a factor in the causation of disease, and to try an anti-rheumatic remedy as an aid to diagnosis.

SLEEPLESSNESS.

Norbury (*Med. Fortnightly*, May 15, 1896) writes:—It is unfortunate that the physiology of sleep is not better understood. It is even more unfortunate that what we do know about the phenomenon of sleep is not more diffused among the profession. How frequently indeed, do we observe physicians who mistake unconsciousness for sleep, and who seemingly regard the goal of the application of their therapeutical measures, as having been reached, when they have succeeded in rendering a tired, worn-out, nervous individual oblivious to his surroundings by placing him in a condition which they call sleep, but which is, simply unconsciousness. An experience of several years in insane hospital practice presented to the writer, in a very strong light, the enormity of this error and its wide prevalence. It was no uncommon sight, to see patients brought to the hospital in an unconscious state, due to the administration of narcotics; opium or morphine being the favorite drug used. One case is worthy of mention here, a male, neurasthenic, harmless, but suffering from the exaggerated mental symptoms, so marked in this disease, was accompanied by his physician to the hospital. The physician stated his reason for coming was, that he considered it important to keep his patient asleep, so that he would not appreciate the humiliation of entering the hospital, and further, that inasmuch as he had not been sleeping well for some time, and that he was now sleeping, he considered the opportunity a good one, to let him recuperate. To this end, the physician was at intervals giving hypodermic injections of morphine, and the poor, worn-out, narcotized patient, saturated with morphine, and believed to be asleep, was, as best he could, with his worn-out nervous mechanism, fighting for his life, which his respiration, weak pulse and inhibited reflexes, showed was at very low ebb. This case was not an exceptional one; it was, alas, too common an experience. The physician had lost sight of the very essential principle which should govern our therapy in the treatment of sleeplessness, and that is, that sleep has for its object the repair of the wear and tear of vital processes of life, and to insure sleep we must not interfere with these processes, which we do when drugs are given until sedation results.

There is another thing to bear in mind in the consideration of sleeplessness, and that is, that there is a source of irritation somewhere in the economy, which, if relieved, will be followed by sleep. Again, "an axiom" well worth remembering, is, that the more gentle the means employed to induce sleep, the more natural will be the sleep induced, and the more gentle the means employed, the more careful must we be to select the right time for their use. We believe that Dujardin-Beaumetz was right when speaking of the use of drugs in the treatment of sleeplessness; he said: "That for a drug to be hypnotic, it must imitate the natural condition of sleep, by effecting a lowered intra-cranial pressure and that drugs which, though bringing about unconsciousness, do not lower cerebral pressure, or which increase it, cannot claim to be hypnotics. Opium and morphine are objectionable on this ground. Drug treatment must put the patient in a position to go to sleep in a natural way, and not *put* him to sleep." Sedatives do this, but narcotics do not.

In the use of sedatives we must be cautious and not use them *ad libitum*. The writer in a paper on "Sedatives in the Treatment of Insanity" (1892, *Hospital Bulletin of Minnesota*), said, "Each case is a 'law unto itself,' and as such requires patient and persistent study ere we commit the folly of giving a hypnotic, when more simple and efficacious methods would produce satisfactory results." You cannot cure sleeplessness by drug treatment; the drugs simply conserve nervous energy and act as valuable assistants to the building-up process, necessary to cure the sleeplessness. Sedatives act, as before stated, by placing the patient in a position to go to sleep, and nature does the rest.

In our experience we have learned to

rely upon the bromides, chloral, cannabis indica and hyoscyamus as sedatives, which, if judiciously used, bring order out of chaos. The bromides lower the sensibility of the brain, and thus promote sleep. The single salts can be used, but in the writer's experience, where a sedative is indicated in sleeplessness, it is better to combine them, and when there is any excitement, add chloral. Cannabis indica is a sedative which is but little used by the general practitioner, and for the reason that it is misunderstood, misrepresented, and as a result never used as it should be. Clouston, Mathison and Echeverria have taught us their value. Hyoscyamus is another sedative, the value of which is not appreciated, a drug which is endorsed by Budde, Brush, Krafft-Ebing as a hypnotic. Now, these valuable sedatives, when combined, give us a thoroughly reliable and satisfactory agent, with which to treat sleeplessness, and in the writer's experience no more elegant or reliable preparation is before the profession than that of Bromidia, in which is combined in proper proportion, the bromide of potassium, chloral hydrate, hyoscyamus and cannabis indica. We feel that the profession can always rely upon this combination, and find it especially useful in the treatment of sleeplessness.

VISITING LIST OF A PHYSICIAN AS EVIDENCE IN SUPPORT OF HIS CLAIM FOR PROFESSIONAL SERVICES.*

The book entries of a physician or surgeon, if made at the proper time and itemized as minutely as is required in the case of a merchant, may be properly received as evidence to prove a claim for medical services; but a physician's visiting list containing simply a name with a succession of hieroglyphics, to be explained only by the person making them, who, in this case,[1] was the physician himself and an incompetent witness, inasmuch as his patient against whose estate the claim was sought to be established was dead, is clearly inadmissible as a book of original entries to prove a claim for such services against the estate of such decedent.

This was the rule of evidence applied in German's Estate, and it has since been followed in Pennsylvania. Ashman, J., in passing upon exceptions taken to this ruling, said, "The rule of evidence which introduces a tradesman's book of original entries to prove his sales, is permitted to override the principle that a party may not manufacture evidence for himself, on the ground of convenience. It cannot be said to have been dictated by necessity, because in England, where these books serve only as memoranda from which the party producing them may refresh his memory, it has been found that all the advantage, without any of the danger incident to this character of proof, is obtainable. For the reasons which justify its use in the case of a merchant, it has been so far extended as to embrace, perhaps, the books of any person whose business is not in money, and is of such a nature that its transactions can be itemized with the precision with which a sale may be recorded. It is perfectly consistent with this broad statement that a doubt should have been expressed in Hale's Executors *vs.* Ard,[2] whether the books of an attorney containing charges for advice are evidence. Such entries, as was there said, must be incapable of certainty in description, because the services themselves are indefinite in their nature, and can neither be gauged by the time they occupy, nor compared with other similar services with which a jury is supposed to be acquainted. But this objection can scarcely be said to apply to the record kept by a physician. It may cover a daily entry of each visit, with the name of each patient, a list of the medicines furnished, and the price which custom has fixed for the particular

*Lorenzo D. Bulette in the *International Medical Magazine.*

[1] German's Estate, 16 Phila. 318 (1883).

[2] 12 Wright, 24.

service. Such a record will comprise all the incidents of certainty of time, person, labor and value, and each entry will be complete in itself. No more than this is required in the books of an artisan, and the measure of necessity is at least as great in the one instance as the other. If the proposition has been correctly stated, it affords an easy test of the validity of the proof submitted by the claimant. His diary or visiting list, as a physician, contained on each page a list of names of patients, with tally marks opposite, in columns which were headed separately with the days of the week; the name of the month appearing at the top of the page, and the date of the year on the cover. One column at the end of the space for each week was headed 'Amount.' Preceding these lists, as a sort of preface to the book, was a 'Table of Signs.' This table embodied a series of hieroglyphics and figures, which were intended to denote visits made and to be made, and visits repeated or to be repeated; consultations proposed or made; services at the office; visits at night; medicines furnished, and the like. It is quite clear that entries patterned after this fashion could serve, at best, only as memoranda from which to make more formal charges. As original entries, even if decipherable, they were incomplete, because their form admitted only of a weekly charge in money, and, in point of fact, no charge at all appeared to have been made. Allowing the utmost latitude to the plea of convenience and necessity, the law cannot tolerate as self-proving an entry of services which can be translated only by means of a glossary. Such writing would be as unintelligible to any ordinary jury as a Hebrew Bible to a deputy sheriff. The auditing judge, therefore, properly threw it out of the case. The sum which he finally awarded the claimant, we think, was all that was shown by the oral testimony to be due."

And, in a recent case,[3] Hanna, P. J., in following the law as above laid down, said, "The physician, the claimant, was, through his own want of care and forethought, unable properly to prove his claim for medical attendance and services to the decedent. By reason of the death of the latter, the claimant was incompetent to testify as to matters occurring in the lifetime of his late patient, so far as related to his own claim. This he must be presumed to know, and a due regard for his own interest should lead him to keep a book of original entries, showing a charge for attendance, with the date, the name of the person against whom the charge is made, and the amount of compensation for the services or attendance. If this had been done, the book properly and regularly kept, supported by the testimony of the claimant or his clerk who made the entries, will be *prima facie* evidence, and thus far sustain the claim. But, on the other hand, the physician relied upon what is known as a 'visiting' list to prove the number of his visits, and the parol testimony of experts to show their value. Such a book, containing simply a name, accompanied by a succession of hierographics, to be explained and translated only by the person making them, who, as shown, is an incompetent witness, is clearly inadmissible as a book of original entries."

And the judge continues, with some emphasis, "It is a matter of surprise that physicians are so lax in this respect, and the present case furnishes an illustration of the danger of depending upon that which is simply a memorandum book for their own information and to refresh their recollection. In fact, in the case before us, if the testimony of the niece of the decedent had not been attainable, the claim would be entirely without support, and this alone prevented its entire rejection. We think the claimant should, under the circumstances, be content with the allowance made to him by the auditing judge."

The rule excluding physician's visiting list, as books of original entry, as applied in Pennsylvania, prevails, perhaps, in the other States of the Union, except Mississippi.

[3] Kelley's Estate, 5th Dist. Rep. 283 (1896).

For headache, vertigo, etc., due to atheromatous degeneration:

℞

Ergotin	gr. iss.
Extr. of calabar bean	gr. ¼.
Extr. of gentian	q. s.

M. ft. pil. no. j.

Sig.: From one to ten pills daily, increasing the quantity according to tolerance.—*Le Progress Medical.*

HYSTERICAL ANOREXIA.*

We can only succeed in forming a history of hysterical affections by studying separately each of their symptomatic groups; after this work of analysis, we should gather the fragments together and re-form from them the entire disease. Viewed in its *ensemble*, hysteria has too many individual phenomena and difficulties for us to seize the particular one in general. This plan, more than disputable if we apply it to diseases limited as to time, space, and locality, and as to the modality of phenomena, here finds its legitimate employment.

The digestive disturbances coming on during the course of hysteria are numerous. They consist in repeated and, at times, almost uncontrollable attacks of vomiting, in gastric pains, hematemesis, attacks of constipation or diarrhœa,—peculiar either in their evolution or in some of their characteristics. Among the serious symptoms, the vomiting of blood has especially attracted the attention of physicians; gastralgias—phenomena purely subjective—are little understood; and intestinal disturbances are still left a matter of much uncertainty. Among the more interesting of these are the odd perversions of appetite, of which there are superabundant examples and varieties almost innumerable. In relating singular facts in cases of strange appetites, we always neglect to study the true condition of the patient, and are reduced to the unproductive idea that hysterical patients are subject to the most improbable disorders of the digestive functions.

My object at this time is to allude to one of the forms of hysteria of gastric origin, so frequent that a description may not seem necessary, such a case being sufficiently common and constant in its symptoms, as most physicians of experience could affirm. The name of anorexia may perhaps be replaced by that of hysterical inanition, which would better represent the most striking symptom. I have chosen, without otherwise defending it, the first term precisely because it is connected to a phenomenology less superficial, more delicate, and also more medical.

Of the various periods which compose digestion, the best analyzed by the patients and least studied by physicians is certainly that of the appetite. In certain cases the appetite is suppressed without the patient experiencing any other sensation than the regret of being deprived of an excitant which invites him to nourishment. It does not arise from repugnance, and often the proverb, "Who wishes an appetite, it will come by eating," is found to be true. Under other conditions, the patient experiences a more or less acute repulsion for certain foods. Under others, finally, all alimentary substances, whatever they may be, provoke disgust. As general as the inappetence may be, it has always a graduated scale, and foods are not indiscriminately repulsed with a like insistance.

There are, on the contrary, affections, perhaps, either of the central nervous system, localized or diathetic, which are accompanied by an illusory appetitive sensation, returning at unequal or quasi-regular intervals. In some hysterical patients, we observe those false, exacting appetites, imperious to the same degree as seen in certain diabetic patients. Almost always, the patients, obeying a theoretical hypothesis, start off with the idea that their indisposition is due to inanition, and that they will succeed in driving it off by means of some nourishment, however small in quantity it may be. Experience shows that in these cases two drops of laudanum will serve better to appease imaginary hunger than the ingestion of food. With the exaggerated sensation of appetite is the supposition that nourishment will calm the want, answering in an inverse sense a diminished appetite, and the conviction that alimentation will be injurious. The patient acts from thence, as in the first case, conformably to an instinctive hypothesis. Docile, desirous of being relieved from her troubles, she acquires the certainty that her health increases more by continuing alimentation, freed from suffer-

*M. La Faure, M.D., Paris, in *Massachusetts Medical Journal*, July, 1896.

ing, that her apprehensions were ill-founded. Indocile, anxious before all of avoiding a hypothetical pain, but alarmed from the start, she maintains her mode of treatment and abstains from eating. Such are the cases of hysteria which I intend to touch on and trace their history.

A young girl, between fifteen and twenty years of age, experiences some strong emotion. She experiences from thenceforth, after meals, vague sensations of fullness; anguish; gastralgia; *post prandium*, or râther following from the commencement of the meal. Neither the patient nor her friends attach any importance to it; no lasting inconvenience results from it. The next day the same sensation is repeated, and it continues still trifling but lasts for several hours. The patient makes up her mind that the best remedy for this indefinable *malaise* or painful sensation, consists in taking less food. Up to this point there is nothing extraordinary; it is not the patient suffering from gastralgia who may give way to this temptation, up to the time where she acquires the certainty that her relative inanition is not only without profit, but that it aggravates her sufferings. Among hysterical patients the state of affairs is different. Little by little she reduces her nourishment, feigning sometimes a headache, sometimes a momentary disgust, sometimes for fear that the painful after-meal impressions may be repeated. At the end of some weeks these are no longer supposed transient repugnances; there is a refusal to partake of food, which may be prolonged indefinitely. The disease is declared, and it follows so fatal a march that it becomes easy to prognosticate its future.

Unhappy the physician who, not recognizing the peril, treats the fancies without ability, or treats the obstinacy of the patient, which he hopes to conquer, by medicines and friendly advice, by threats or attempts at intimidation. With the hysterical patient a first medical mistake is never reparable. Ever on the lookout for opinions concerning themselves, of those especially with which their family is associated, they never pardon them, and considering that the physician has commenced the hostilities, the patient gives herself the right to continue them with an implacable tenacity. At this initial period, the only wise conduct to observe is to hold one's tongue, and to remember that, when voluntary inanition dates for several weeks back, it has become a pathological condition.

It is important, in order to appreciate the various elements which co-operate at the commencement of the disease, to submit each one of them to a minute analysis. The gastric pain, which is, or which appears to be, the starting point of the symptoms, especially merits attention. It varies in intensity from a confused feeling of pressure, up to a sort of stomachal cramp, accompanied by faintness, pallor, sweats, or even chills; no vomiting, no real wish to vomit, even in extreme cases; only the patient pretends that a degree more of it would provoke vomiting. To rely on appearances, the painful cases differ in nothing from those that we have such frequent occasion to observe in all the affections of the digestive apparatus. It is alimentation which brings them about; they do not take place except from eating.

The painful sensation exists not only at the time of taking food, but it persists more or less sensibly in the interval between meals; sometimes it is insignificant, sometimes more troublesome; at times so slight that the patient suspects a general *malaise* without being able to assign it a fixed point. Whatever then may be its form, its seat, and its degree, is the painful sensation due to a stomachal lesion, or is it only the reflex expression of a perversion of the central nervous system?

We find, at the beginning of a great number of cerebro-spinal diseases, præcordial anguish, feeling of pressure, of epigastric contraction, which likewise follow even transient emotions. There is not one of us who may not have felt this sort of anxiety, and connected it to the definite moral cause which produced it. When an individual is suddenly attacked by an epigastric constriction coming on without appreciable cause, the uneasiness is such that it awakens inquietude. The patient asks herself from whence springs this strange impression, and it is often from such an investigation that the mental disturb-

ance of the unfortunate begins. Supposing that the encephalic affection should not end in such serious consequences, the first hypothesis of the patient, and the most natural, is that she suffers from a disease of the stomach. All epigastric anxiety with the semi vertigo that it often brings about after it is exaggerated by alimentation, is a reason, more than ever, to believe in the existence of a gastric irritation. The characteristics of this gastralgia of a reflex cause are not impossible to discern, the circumstances under which we meet it being by no means rare.

It is distinguished from painful irritation of the stomach because it is not exactly localized, and that there is added to it a wholly special uneasiness; because it comes on suddenly, and has not been preceded by gradually increasing disturbances of digestion; and that it is not, besides, followed by dyspeptic symptoms; because the intestinal functions remain intact, except an habitual constipation, which is easily overcome; because the nature of aliments is without influence regarding it; and, finally, because the manner of the pain. when it exists in reality, is not analogous with the gastric sufferings occasioned by a lesion as superficial as it may be. From the moment when we are certain of the nature of the indisposition, we have made important progress in the establishment of the diagnosis.

The hysterical patient, after some waverings of short duration, does not hesitate to affirm that the only chance of relief which can be acquired by her consists in abstaining from food. It is a fact that remedies appropriate in other gastralgias are absolutely inefficient, with whatever zeal the physician and the patient may employ them. A reason of another order from that which always plays a preponderant part in hysteria still interposes. The patient has lost the sensation of appetite, and it will be necessary for her to consent to eat, to overcome her fear of pain, without being solicited or even encouraged by an appetite for nourishment; in abstaining from it, she satisfies to the contrary two inclinations at the same time, all hysterical manifestations, if they exist, are suspended, leaving the first phase. The patient, far from being weakened, of being melancholy, exhibits a sort of alacrity which is not usual to her; we might almost say that she takes her precautions for future periods, and that she prepares arguments which she will not fail to use.

The repugnance to eating follows its slow progressive march. The meals are reduced more and more, in general to only one meal, that may be the breakfast or dinner. Almost always the patient necessarily suppresses one of the species of foods, bread, meat, certain vegetables. Sometimes she consents to replace one food by another, to which she takes with an exclusive predeliction for the space of some weeks, bread, for example, by biscuits or by crackers, after which she leaves the aforesaid article of food off in order to replace it or not by some other article of diet.

This state of affairs is prolonged thus for weeks and months, without the general health appearing to be unfavorably influenced; the tongue is clean and fresh-looking; there is no thirst; the persistent constipation gives way to slight laxatives; the belly is not retracted; sleep is more or less regular. There is no emaciation, although the nourishment represents only the tenth of the patient's accustomed regimen.

We know too well the strength of resistance of the general health among hysterical patients to be astonished to see them support without apparent damage a systematic inanition, to which robust women could not expose themselves with impunity. It is necessary, besides, to consider that the diminution of food is made by degrees and without abruptness. Now, the economy is habituated more easily than it would seem to this decrease of alimentation.

Another fact, likewise acquired, is that far from breaking down the muscular forces, the diminution of nourishment tends to increase the aptitude for movement. The patient continues to feel more active, lighter, she rides horseback, undertakes long journeys on foot, she receives and makes visits, and undertakes the cares of a fatiguing worldly-minded life, without complaining of the lassitudes of which she might have complained at other times; no visible signs of chlorosis or anemia exist, at least one would not feel authorized to

say that inanition has provoked them, for the majority of these patients are already more or less chloro-anemic.

If the situation does not vary, regarding the anorexia and refusal to eat, the disposition of the patient is modified to a degree that the disease is prolonged, and to the same degree the mental condition of the hysterical patient is made worse.

The physician, if he has promised a rapid improvement, or if he is suspected of unkindness by the patient, has long before this lost his moral authority; nevertheless the patient rarely ever refuses to take some medicine. As she is opposed to nourishment as much as she shows herself willing to take the least attractive remedies. I have seen those who would even swallow pieces of rhubarb, and who would not have, at any price, decided to taste a veal cutlet. The most active gastric stimulants, mild or drastic purgatives and digestive mineral waters would be taken without either injurious or useful effects. It was the same case with diffusible stimulants, fragrant gums, valerian, hydrotherapy, baths of various temperatures, various tonics of iron, cutaneous derivatives, etc. Laxatives alone were useful for preventing constipation, other agents would not produce the least effect on the anorexia.

When, after several months, the family physician and friends, seeing the uselessness of persisting after all their efforts, begin to be uneasy, the mental perversion comes on, which by itself alone is almost characteristic, and which justifies the name, that I have proposed for want of a better one, of *hysterical anorexia.*

The family can beg or threaten, and both serve as a touchstone. They multiply the delicacies of the table in the hope of awakening her appetite; the more their solicitude increases, the more her appetite diminishes. The patient disdainfully tastes the new dishes, and having thus shown her good will, considers herself under no further obligations. It is a well-known law, and conforms with the experience of all, that the best means of increasing the stubborness of hysterical patients is to allow them to hear the supposition implicitly or explicitly expressed that if they wished they could control their sickly impulses, a single concession will make them pass from the condition of patients to that of capricious children, and this concession, half from instinct, half from the part taken, they will never consent to. The anorexia becomes by degrees the only object of pre-occupation and conversation. It forms thus a kind of atmosphere around the patient which envelops her, and from which she cannot escape at any hour of the day.

To protest that the patient cannot live on a quantity of food which would not suffice for a small child, she answers that her nourishment is sufficient for her; and besides, she has neither changed nor become thin; no one has ever seen her refuse a task or show fatigue; she knows better than anyone what is necessary for her; and besides it would be impossible to tolerate a more abundant diet.

Then the inanition will bring on at length a disease of the stomach. The hysterical patient answers that she has never been better, that she does not suffer, and that similar fears are contradicted by her being well.

At this period the pains of the first stage are palliated or dissipated; if they reappear it is only at long intervals or in proportions easily tolerated—still an argument in favor of diet to which the patient gives credit for her amelioration.

The fast, besides, is not absolute, and has nothing in common with the refusal of foods by melancholy patients. The anorexia is not aggravated, and especially is not changed into a disgust similar to that which some phthisical and also many cancerous patients experience.

The patient assists willingly at meals with the family under the conditions that she is left free to eat as she pleases.

That which dominates in the mental condition of the hysterical patient is, above all, a certain quietness, I may say almost a pathological true contentment. Not only does she not sigh after her cure, but she delights in her condition, notwithstanding all the vexations it stirs up for her. In comparing this satisfied assurance to the obstinacy of the insane I do not believe it exceeds it in measure. When we view all the other anorexias we shall see how much they differ.

Even with a strong repugnance a cancerous patient hopes and solicits a food which awakens the appetite, he is ready for every attempt, though incapable of overcoming his disgust. The dyspeptic, without organic lesion, put his wits to work in order to vary his diets to aid himself by all the means in his power, complaining with habitual bitterness of those who suffer from the stomach. Here nothing of the kind; on the contrary, an impregnable optimism, against which supplications and threats alike are broken. I am not suffering, I am very well: such is the monotonous formula which has replaced the preceding one,—I cannot eat because I suffer. This expression I have heard repeated so many times by patients that now they represent to me a symptom, almost a sign.

If I attach to the mental condition an importance which may perhaps appear exaggerated, it is that all the disease is recapitulated in this intellectual perversion; suppress it, you have an injurious affection destined to give way at length to proper methods of treatment; carry it to extremes, and you will never go too far, you have a dyspepsia without parallel, which follows a foreseen course and which cannot be overcome by the usual means.

I do not think, besides, that the gastric hysteria would make, in this connection, an exception; in the other hysterical localizations we find at least an equal indifference, as unmanageable or as painful as the symptoms may appear. The hysterical patient, with a convulsive cough, does not insist that we shall free her from an irritant and at times ridiculous spasm; she complains in consonance with those who complain, but when we try to actively contend against the disease, she assists our treatment more from recklessness than from zeal.

It is the same with paraplegic patients condemned to absolute rest, and who consent to live in this way without requiring fatigue from the physician by useless attempts that he might resort to as heroic means.

PERISCOPE.

A birth through a central rupture of the perineum, a very rare complication of labor, is reported in the *British Medical Journal*. The mother was a primipara, aged twenty-six. The membranes ruptured eleven hours after the beginning of labor, and then the head, presenting in the first position, bore down on the perineum. After a time the midwife made an incision on each side, about a third of an inch deep. In protecting the perineum with the hand she felt something like a hemorrhoid protruding, but on inspection it proved to be the nose and part of the face of the fetus. A pain followed, and the whole head was delivered through the same opening, which was seen to be behind the unlacerated posterior commissure and in front of the anal ring. The body came out during the next pain, twelve hours from the beginning of labor. Ten minutes later the after-birth was expelled through the same unnatural aperture. The child was a male, weighing eight pounds, and measuring nearly twenty inches. The mother's perineum was examined; a large rent, actually wider than the vulvular cleft, was seen. The anal ring and rectum were not involved. The posterior commissure formed a bridge of flesh not an inch broad when gently stretched. The tissues bounding the rent were badly bruised, and the posterior vaginal column remained untorn, so that there were two openings in the vagina leading to the unnatural canal in the perineum. There was also laceration of the valve close behind the urinary meatus. The perineal rent was closed directly after labor, the bruised tissues being first trimmed away; but a second perineorrhaphy was required a fortnight later, and ultimately a small vagino-perineal fistula remained.

The normal climacteric may be attended by mild or moderately severe symptoms, usually nervous phenomena, according to Dr. Homer C. Bloom, in the *University Medical Magazine*. He claims, from the examination of 400 cases in six years, that it is a function that is passing away, and says that it has nothing to do in itself with originating organic disease, nor is it responsible for the ills of matronhood, but frequently, owing to the fact that the coincident intense nervous phenomena mask other less pronounced symptoms, and because of the common delusion that all conditions at this time are consequent upon the change of life, organic disease is often overlooked. As a physiologic condition nearing its end, there should be no menorrhagia

nor increased menses, and any discharge over and above the normal amount demands an immediate digital examination. The length of time in which women suffer from menopausal phenomena varies greatly. Where the discharge is brought about abruptly, they are longer and more intense; when there is a dodging period covering a year or two, the symptoms are milder and the phenomena cease more quickly. An average of two years covers the duration of the usual symptoms attending the climacteric. The average age when menstruation ceased in this series of cases was forty-three years and eight months. The oldest woman in the series to complete her menstrual life was fifty-four; the youngest to reach this point was twenty-nine; the average puberty was fourteen years and three months, the youngest woman reaching puberty at ten years, the oldest being a little over eighteen years. The average menstrual life was twenty-nine years and three months. Nationality in these cases establishes the old truth that puberty is sooner reached in warm climates, and that the negro woman from the South gave a history of earlier puberty; also that there is no positive relation between early puberty and a late menopause.

A case of perfect placenta previa centralis, a very rare occurrence, is reported by Duloroy, the report being abstracted in the *British Medical Journal*. The placenta was completely inserted on the inferior segment of the uterus, so that the os was closed and the edge of the placenta could not be reached. Hemorrhage, as might be expected, was most alarming. The patient was aged thirty, and in her fourth pregnancy. Hemorrhage set in on April 25, 1895, and continued. On May 17th a bleeding elastic mass filled the upper part of the vagina. No part of the fetus could be felt. On abdominal palpation the head was found presenting; but not engaged in the pelvis. After plugging and various palliative measures, labor set in on May 24th, 11 P.M. By 2 A.M. the os was wide enough to allow of version. A jet of blood, as though from a big tap, issued from the vagina just before the hand was introduced. Turning was successfully performed, and the uterus contracted vigorously, cramping Duloroy's hand, yet effectually checking hemorrhage. The infant remained in a state of suspended animation for an hour. After its expulsion the uterine hemorrhage ceased entirely. The mother was well in three weeks, when the child was in perfect health. The most scrupulous antiseptic precautions were used at and after the labor. Pinard notes that perfect placenta previa centralis, where the centre of the placenta actually occupies the central point of the os, is extremely uncommon. He firmly believes that insertion on the lower segment of the uterus may be explained by the concussion of railway traveling during the first weeks after conception. Duloroy's patient was a laundress, and he thinks that the movements of the body in the exercise of her vocation may have brought about the vicious insertion of the placenta. The perineum was luckily torn in this case, allowing a rapid extraction of the fetus when the bleeding was simply appalling, even to an expert.

The ultimate etiology of deformity, and its practical application, was discussed at the American Orthopedic Association by Dr. Doyle Whitman. It is well-known that the erect posture is comparatively recently acquired. In the process of evolution and adaptation, those structures whose function had been lost were subject to degeneration and disease, and those functions most recently acquired were most susceptible to weakness and injury. The erect attitude was difficult of acquirement, as shown in the effort of the infant to stand; it was also an attitude difficult to maintain against the force of gravity, and especially so if the structure of the body was in any way weakened. The ordinary so-called postural deformities were then explained. The flexion and contraction deformities were, however, of special interest to the orthopedic surgeon. None of the theories that had been advanced to explain this universal flexion was satisfactory, but if one accepted the morphological standpoint, it would be evident that as the erect posture was a newly acquired attitude, so also the uses of the limbs proper to that posture were newly acquired. Complete extension of the limb in the support of this posture required not only the greatest expenditure of nervous energy, but also the greatest strain upon the joint-surfaces, and when the ability to assume this attitude became impaired, the affected member became flexed—in other words, it involuntarily assumed an attitude common to the lower or quadrupedal form of locomotion. Flexion, whether as the result of painful joint disease, or in hemiplegic deformity, was usually an evidence of unbalanced nervous influence and of preponderance of power of its lower or reflex centers. In joint-disease, the cause was local irritation and consequent muscular spasm; in the second, the inhibitory influence of the higher center was impaired or removed. The erect posture was an evidence of the higher position of man in the scale of evolution; a position due solely to the greater development of the higher centers of the brain. When the stimulation and controlling force of the higher center was directly or indirectly impaired, the more difficult and newly acquired attitudes were disused, and the affected part fell backward toward the type from which it had been differentiated.